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XVII. HYMENOPTERA, II: ANTS (FORMICIDAE).

By WILLIAM MORTON WHEELER.

Subfamily PONERINAE.

1. *Myopopone castanea*, F. Smith var. *maculata*, Roger.
Several workers from Kobo, 400 ft.; "in rotten wood," "under logs" and "under bark."
2. *Centromyrmex feae*, Emery.
Two workers from Sadiya, N. E. Assam; "under logs."
3. *Odontomachus monticola*, Emery.
One worker from Yembung, 1100 feet.
4. *Leptogenys (Lobopelta) assamensis*, Forel.
One worker from Kobo, 400 ft.
5. *Euponera (Brachyponera) nigrita*, Emery.
Several workers from Kobo, 400 ft.; "in rotten wood."
6. *Ponera confinis*, Roger, var.
Two winged females from Farm Caves, near Mulmein; "in depths of a large cave."

These specimens are even darker than the var. *wroughtoni*, Forel, of Ceylon, but without the corresponding workers I hesitate to describe them.

7. *Pachycondyla (Ectomomyrmex) astuta*, F. Smith.
A single worker from Rotung, 1400 ft.; "under stones."
8. *Pachycondyla (Ectomomyrmex) javana*, Mayr subsp. *materna*, Forel.
Several workers from Rotung, 1400 ft.; "under leaf-stem of plantain."

Subfamily DORYLINAE.

9. *Dorylus (Alaopone) orientalis*, Westwood.
Many workers from Kobo, 400 ft.; "in rotten wood."
10. *Dorylus (Alaopone) vishnui*, sp. nov.

Worker. Length 1.5—6 mm.

Resembling *A. orientalis*. Mandibles falcate, pointed, with a single large tooth or more rarely with two teeth besides the apical point. Head subrectangular, about $\frac{1}{4}$ longer than broad, scarcely

broader in front than behind, with straight sides and deeply, arcuately excised posterior margin, and a median longitudinal groove which is faint or obsolete in the region of the vertex. Smallest workers with the head a little broader behind than in front, with more convex sides and the longitudinal groove often indistinct or lacking, except on the anterior and posterior portion of the head. Clypeus projecting somewhat only in the largest workers. Antennae 9-jointed in all the workers, joints 3-7 of the funiculus broader than long. Thorax as in *orientalis*, epinotum with a distinct longitudinal impression. Petiole fully $1\frac{1}{4}$ times as long as broad in the large workers, at least as long as broad in the smallest. Hypopygium with three subequal points as in *orientalis*.

Whole body more glabrous and shining than in *orientalis*, punctures on the head decidedly smaller and further apart; somewhat coarser on the thorax and petiole. These parts are also shagreened so that they appear somewhat less shining than the head, especially on the sides.

Minute, yellow, appressed hairs arising from the punctures on the head and body much shorter and less conspicuous than in *orientalis*.

Head, thorax, petiole and antennae of the large workers rich ferruginous red; mandibles and clypeus darker; gaster and legs paler; in the smallest workers the whole body is reddish yellow, the mandibles light red.

Described from a dozen workers from Mulmein, Lower Burma.

This form is certainly distinct from *orientalis* in the longer head of the large worker, in sculpture and pilosity, and in having the petiole longer than broad instead of distinctly broader than long. As both Emery and Forel are agreed that *Alaopone curtisi*, Shuckard and *A. oberthüri*, Emery, are merely synonyms of *orientalis*, Westwood, and as this latter species is the only one known from the Oriental Region, I am compelled to regard the Burmese specimens as representing a new form. It may, perhaps, have only subspecific value and may be the hitherto unknown worker of *A. fusca*, Emery or *longicornis*, Shuckard, two subspecies of *orientalis* known only from male specimens. *A. vishnui* differs from *A. conradi*, Emery, of Togo, the only other *Alaopone* besides *orientalis* with a known worker, in its much shorter head (the head of the large worker *conradi* is nearly twice as long as broad) and in the darker colouration.

Subfamily MYRMICINAE.

11. *Sima rujonigra*, Jerdon.

One worker and two dealated females from Sadiya, N.E. Assam and Kobo, 400 ft.

12. *Pheidologeton (Aneleus) aborensis*, sp. nov.

Soldier. Length 3—3.5 mm.

Head large, subrectangular, distinctly longer than broad, very slightly narrower in front than behind, with straight sides, broadly rounded posterior corners and the posterior margin distinctly but not deeply emarginate. Upper and lower surfaces convex. Median longitudinal furrow extending the full length of the head but shallow. Eyes small, rather convex, but consisting of numerous facets, situated near the anterior third of the head. Median ocellus present in some individuals. Mandibles with 5 subequal teeth, moderately convex, with rather straight external borders. Clypeus short, flattened in the middle, its anterior border broadly rounded, feebly and sinuately excised in the middle. Antennæ short, rather slender; scapes reaching to about $\frac{1}{3}$ the distance between the eyes and the posterior corners of the head; basal joint of the two-jointed club scarcely half as long as the apical; first funicular joint as long as joints 2-4 together; joints 2-8 scarcely longer than broad. Frontal carinæ short and diverging. Frontal area large, flat. Thorax shorter than and half as broad as the head, broadest through the pronotum, which is broader than long and, when seen in profile, very convex and rounded above, with rounded humeri. Mesonotum small, transversely concave in the middle, separated from the pronotum by a distinct suture and ridge, its general outline in profile rapidly sloping to the epinotum from which it is separated by a deep suture. Epinotum much lower than the pronotum, about as long as high, in profile with subequal base and declivity, the former horizontal, the latter sloping, armed with two small acute upwardly directed teeth, which are as long as broad at their bases. These bases are prolonged anteriorly and posteriorly on each side into a ridge along the base and declivity of the epinotum. The space between these ridges is slightly concave. Petiole slender, longer than high through the node, which has a long, concave anterior and flat posterior surface, with the summit rounded in profile and transverse when seen from above. Lower surface of petiole without a tooth. Postpetiole small, rounded, transversely elliptical, a little broader than long and a little broader than the petiole. Gaster large, ovate, narrowly emarginate at the insertion of the postpetiole. Sting well-developed.

Mandibles, clypeus and frontal area shining, the mandibles coarsely and sparsely punctate, longitudinally rugose at their bases. Clypeus and cheeks finely and regularly longitudinally rugose. Remainder of head opaque, more coarsely rugose, the rugæ on the front diverging backwards and covering a fan-shaped area, those on the posterior fourth of the head transverse but not coarser than the frontal rugæ, and those on the sides longitudinal. Thorax, petiole and postpetiole opaque, pro- and mesonotum transversely and rather irregularly rugulose; epinotum and base of petiole reticulately, upper surfaces of petiolar and postpetiolar nodes irregularly rugulose. Gaster subopaque or slightly shining above and, especially at the base, finely reticulate and sparsely punctate; base of first segment also with traces of

fine longitudinal rugæ. Antennal scapes and legs sparsely punctate.

Hairs on the head, thorax and gaster yellow, erect, delicate, pointed, very sparse; on legs and scapes short and appressed. Pubescence sparse, distinct only on the gaster.

Dark brown, base of gaster, thorax, petiole and postpetiole more reddish and paler, especially on the sides, head darker; clypeus and cheeks red; mandibles red, with black borders; posterior edges of gastric segments reddish or yellowish; antennæ and legs brownish yellow or testaceous.

Worker. Length 1.3—1.5 mm.

Head much smaller than in the soldier, scarcely longer than broad, with rather convex sides and nearly straight posterior border. Clypeus not bicarinate, its anterior border entire or very feebly and sinuately excised. Frontal area and eyes very small, the latter consisting of only two facets. Antennæ similar to those of the soldier, but their scapes reaching to the posterior corners of the head. Thorax like that of the soldier, more than half as broad as the head, the pronotum somewhat less convex, the mesonotum without a transverse impression, the base of the epinotum convex and the teeth reduced to mere minute angles. Petiolar node rounded and conical, not compressed anteroposteriorly.

Whole body smooth and shining, finely and very sparsely punctate, sides of epinotum and peduncle of petiole finely reticulate-rugose.

Pilosity similar to that of the soldier but the erect hairs much sparser and shorter.

Colour paler than in the soldier; body yellowish brown; antennæ and legs paler, head and gaster somewhat darker.

Described from numerous soldiers and workers taken at Kobo, 400 ft.; "in rotten wood."

This species is closely related to the other described species of *Ancleus* (*pygmaeus*, Emery from Ternate, *similis*, Mayr from the Nicobar Islands, *minimus*, Emery from Beliao Island and *sarasinorum*, Emery from Celebes). It differs in its greater size, in sculpture and pilosity from *minimus*, in its smaller size and in sculpture and colouration from *pygmaeus* and *sarasinorum*, and from the latter also in lacking conical projections on the posterior corners of the head in the soldier. Only the worker of *similis* is known, but this has a bicarinate and deeply excised clypeus and its colour is paler than that of the worker *aborensis*.

13. *Crematogaster rogenhoferi*, Mayr.

Numerous workers from Rotung, 1400 ft., and Dibrugarh, N.E. Assam.

14. *Crematogaster biroi*, Mayr var. *aikeni*, Forel.

Many workers from Upper Rotung, 2000 ft.; "under leaf-stem of plantain."

15. *Meranoplus bicolor*, Guérin.
A single worker from Sadiya, N.E. Assam.
16. *Pristomyrmex brevispinosus*, Emery.
Numerous workers from Kobo, 400 ft.; "in rotten wood."

Subfamily DOLICHODERINAE.

17. *Tapinoma melanocephalum*, Fabr.
Four workers from Thingannyinaung to Myawadi, Burma, 900 ft.
18. *Technomyrmex albipes*, F. Smith.
Numerous workers from Kobo, 400 ft.; "in rotten wood."

Subfamily CAMPONOTINAE.

19. *Plagiolepis longipes*, Jerdon.
A single worker from Misty Hills, east side of Dawna Hills, 2000 ft.
 20. *Oecophylla smaragdina*, Fabr.
Three workers from Dibrugarh, N.E. Assam and Kobo, 400 ft.
 21. *Camponotus nicobarensis*, Forel.
Numerous workers and a single deälated female from Kobo, 400 ft., "under bark"; Rotung, 1400 ft., "in dead bamboo," and Dibrugarh, N.E. Assam.
 22. *Camponotus taylori*, Forel var. *albosparsus*, Forel.
Several minor workers from Sadiya, N.E. Assam; "under logs."
 23. *Polyrhachis striatorugosa*, Mayr.
One deälated female from Upper Rotung, 2000 ft.
 24. *Polyrhachis mayri*, Roger.
Several workers from Upper Rotung, 2000 ft.
 25. *Polyrhachis halidayi*, Emery.
Several workers from Rotung, 1400 ft.
 26. *Polyrhachis lacvissima*, F. Smith.
Several workers from Sadiya, N.E. Assam.
 27. *Polyrhachis dives*, F. Smith.
Several workers from Dibrugarh, N.E. Assam, "from nest in tree."
 28. *Polyrhachis tibialis*, F. Smith.
One winged female from Kobo, 400 ft.
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